

Tutorial Letter 101/3/2017

SAFETY MANAGEMENT IIA MNO2603

Semesters 1 and 2

Department of Operations Management

IMPORTANT INFORMATION:

Please activate your myUnisa and myLife email addresses and ensure that you have regular access to the myUnisa module site MNO2603-2017, as well as your group site.

Note: This is an online module; therefore, it is available on myUnisa. However, to support you in your learning process, you will also receive some study material in printed format.

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Dear Student

1 INTRODUCTION

Greetings to you and welcome to **Safety Management IIA**. This exciting field of study will be useful in both your personal life and in the workplace. I trust that you will enjoy your studies and make the most of this opportunity.

As an adult student in distance education, you have to take full responsibility for your studies. Whether you succeed or fail is up to you – and it depends on the amount of work you put in. We suggest that you keep to the study programme in this tutorial letter diligently. In the study programme you will notice that the study material must be covered in sequence and by certain target dates. The programme includes two compulsory assignments and one self-assessment assignment.

Because this is a fully online module, you need to use myUnisa to study and complete the learning activities for this course. You should therefore visit the websites on myUnisa for MNO2603 frequently.

1.1 To get started

As already mentioned, this module is a fully online. You need to go online to see your study material and read what to do for the module. Go to the website at: <https://my.unisa.ac.za> and login with your student number and password. You will see MNO2603 in the row of modules in the orange blocks across the top of the webpage. Remember to also check under the **More** tab if you cannot find it in the orange blocks and to click on the module you want to open.

In addition, you will receive this tutorial letter and a printed copy of the online study material of your module. Although the printed material may appear to be different from the online study material, it is exactly the same since it has been copied from the online myUnisa website.

We wish you success on your journey!

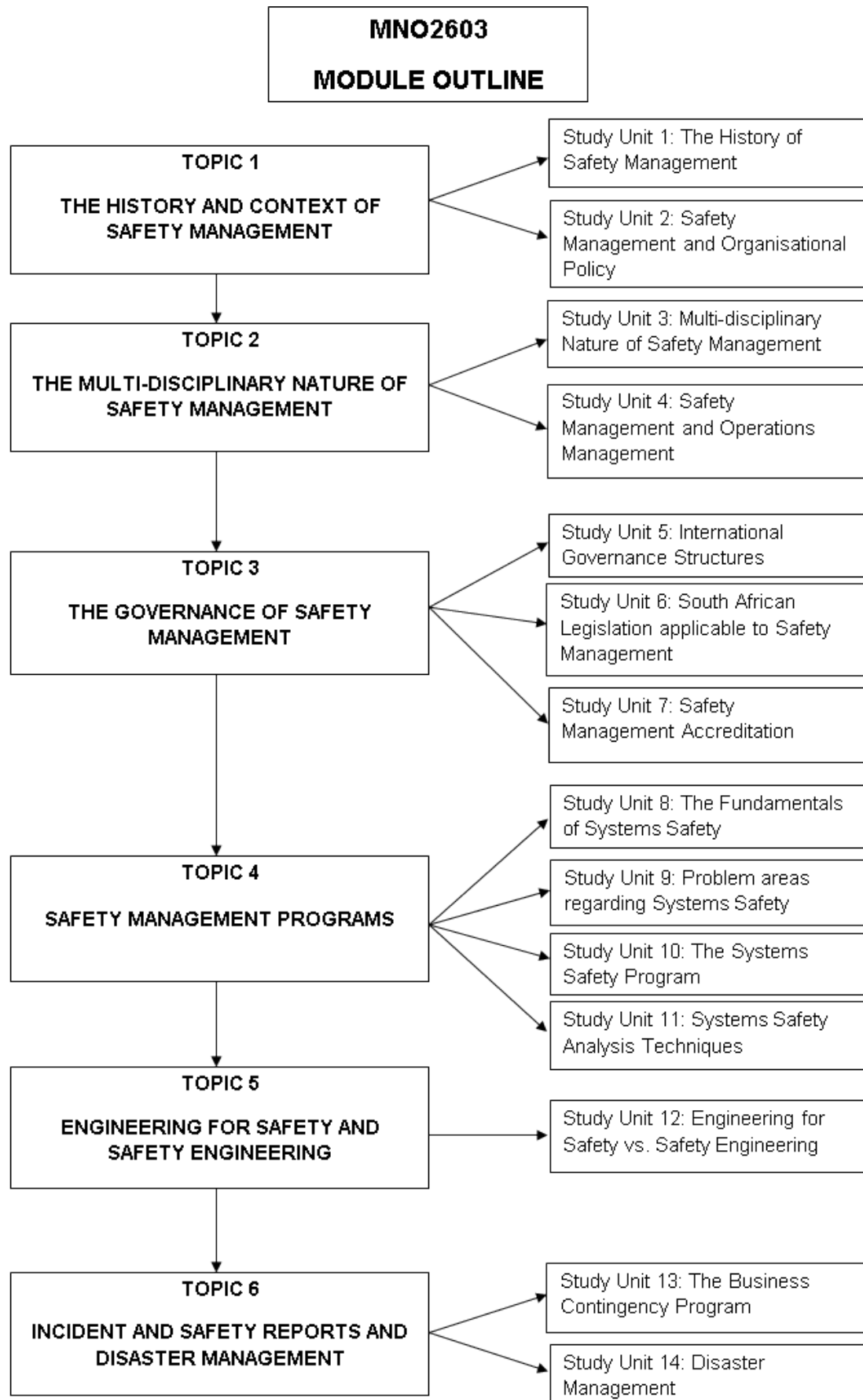
2 OVERVIEW OF THIS MODULE

2.1 Purpose

Students who successfully complete this module will be able to understand the multidisciplinary nature of safety management. They will also be able to understand and apply safety management; they will be able to analyse the structure and functioning; judge the appropriateness of the safety management control measures and programmes needed to meet efficacy requirements in the day-to-day management of business operations and deal with disasters.

The module is delivered by means of myUnisa, the internet and peer group interaction, as well as community engagement in some activities. Your lecturers will interact with you on myUnisa and via email.

Below is an outline of the topics and study units of MNO2603:



2.2 Outcomes of the module

For this module, there are several outcomes we hope you will be able to accomplish by the end of the course:

- **Specific outcome 1:** Demonstrate an understanding of the history of safety management and the contextual imperatives of safety management.
- **Specific outcome 2:** Demonstrate an understanding of the various disciplines and process within an organisation that impacts on safety management.
- **Specific outcome 3:** Demonstrate an understanding of the governance framework that is applicable to the management of safety.
- **Specific outcome 4:** Justify the selection of a safety management programme that meets the requirements of a particular business enterprise and apply such a system.
- **Specific outcome 5:** Interpret the difference between engineering for safety and safety engineering with the view to selecting an acceptable system for managing safety.
- **Specific outcome 6:** Explain the process and practices of managing disasters as well as managing the rectification of such disaster in conjunction with implementing recommendations from an accident and safety audit report.

2.3 Focus of each study unit

The outcomes for each of the units you have to study are given below. They are broad-based knowledge you should have acquired by the end of the module.

Study unit 1: The history of safety management

Students should be able to do the following:

- Explain the developments in safety management before the Industrial Revolution.
- Discuss some of the milestones of the safety movement.
- Discuss the tragedies that changed the safety movement.
- Discuss the contributions of organised labour.

- Discuss accident prevention programmes.
- Explain the contributions of Dyktor.

Study unit 2: Safety management and organisational policy

Students should be able to do the following:

- Define organisational policy.
- Motivate the need for organisational policy.
- Explain the contents of organisational policy related to safety.
- Clarify the safety management accountability for safety in an organisation.
- Explain the implementation of organisational policy pertaining to safety.

Study unit 3: Multi-disciplinary nature of safety management

Students should be able to do the following:

- Explain the roles of:
 - The safety and health manager
 - The engineers
 - The industrial hygienist
 - The health physician
 - The occupational physician
 - The occupational health nurse
 - The risk manager

Study unit 4: Safety management and operations management

Students should be able to do the following:

- Differentiate between the structural parts of an organisation and their basic functions.
- Structure and explain the different elements of operations management in an organisation.
- Relate and explain the role of safety management to each of the structural elements of operations management.
- Explain the interdependent nature of the roles of operations and safety management in an organisation.

Study unit 5: International governance structures

Students should be able to do the following:

- Explain the role and function of the International Organisation for Standardisation.
- Understand and explain the nature and function of ISO 9000.
- Understand and explain the nature and function of ISO 14000.
- Understand and explain the nature and function of OHSAS 18001.

Study unit 6: South African legislation applicable to safety management

Students should be able to do the following:

- Explain the role of standards and codes.
- Explain fundamental legal principles and related legal terms.
- Explain the role of The Constitution of the Republic of South Africa Act 108 of 1996, as applicable to safety management.
- Explain the role of the Department of Labour in health and safety in the workplace.
- Understand the role of The Occupational Health and Safety Amendment Act 181 of 1993 and its regulations.
- Discuss important general sections of The Occupational Health and Safety Amendment Act 181 of 1993.
- Explain the role of the Compensation for Occupational Injuries and Diseases Amendment Act 61 of 1997.

Study unit 7: Safety management accreditation

Students should be able to do the following:

- Define the term 'accreditation'.
- Motivate the purpose and benefits of accreditation.
- Differentiate between the different categories of accreditation of safety practitioners that perform safety management in South Africa.
- Explain the different categories of accreditation of safety practitioners that perform safety management in South Africa.
- Explicate the procedures for accreditation.

Study unit 8: The fundamentals of system safety

Students should be able to do the following:

- Define the term “system safety” and clarify the nature thereof.
- List and explain the basic fundamentals of system safety.
- Indicate the application of system safety within the context of safety management.

Study unit 9: Problem areas regarding system safety

Students should be able to do the following:

- Explain the nature and importance of standardisation.
- Explain the nature and importance of risk assessment codes.
- Explain the nature and importance of data.
- Explain the nature and importance of communications.
- Explain the nature and importance of life cycle.
- Explain the nature and importance of education and training.
- Explain the nature and importance of human factors.
- Explain the nature and importance of software.

Study unit 10: The system safety programme

Students should be able to do the following:

- Explain the essential nature and importance of the safety charter.
- Verify the importance of selling the safety charter to the management of an organisation.
- Clarify the nature of the system safety effort.
- Elicit the life cycle phases and the system safety process.

Study unit 11: Safety system analysis techniques

Students should be able to do the following:

- Define the term 'system safety analysis' and stipulate the reason for utilising system safety analysis techniques.
- Explain the fact that system safety analysis techniques cover a wide range.
- Explain the change analysis technique.
- Explain the event and casual factor chart technique.

Study unit 12: Engineering for safety and safety engineering

Students should be able to do the following:

- Elicit the nature of engineering for safety.
- Explain the role of engineering for safety in dealing with safety in the workplace and working environment.
- Differentiate between the focus of different types of engineering.
- Discuss the role of safety engineering in dealing with safety.
- Explain the contribution of both safety engineering and engineering for safety in ensuring safety under all working conditions.

Study unit 13: The business contingency programme

Students should be able to do the following:

- State the rationale for emergency preparation.
- Clarify the process of emergency planning (emergency action plan).
- Explain the relationship between organisation and coordination as part of the business contingency programme.
- Understand and explain the nature and importance of community involvement.
- Discuss evacuation planning.
- Explain emergency response.

Study unit 14: Disaster management

Students should be able to do the following:

- Explain the nature of disaster management.
- Validate the importance and processes of risk assessment applicable to disaster management.
- Understand and explain risk management during a disaster.
- Explain first aid in emergencies.
- Describe the process of resuming business activities after a disaster.

2.4 Prescribed book

The compulsory prescribed book, which you must acquire:

***The basics of occupational safety: a guide for safety management.* Compiled by: Esterhuyzen, E & Louw, LB. 2014. 1st edition. Cape Town: Pearson Education South Africa. ISBN 9781784340896.**

NOTE: WE STRONGLY ADVISE YOU TO OBTAIN THE PRESCRIBED BOOK IMMEDIATELY TO AVOID ANY POSSIBLE DELAY IN YOUR STUDIES.

3 LECTURER AND CONTACT DETAILS

3.1 Lecturer

The primary lecturer for this module is **Mrs Elriza Esterhuyzen**.

She can be contacted at **012 429 3612** or by e-mail at estere@unisa.ac.za.

Address: Room 3-42 AJH van der Walt Building
Muckleneuk campus
Pretoria

Letters should be sent to:

Ms Elriza Esterhuyzen
Department of Operations Management
PO Box 392

Unisa

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The secondary lecturer who assists Mrs Esterhuyzen on this module is **Ms Leonie Louw**.

She can be contacted at **012 429 4799** or by e-mail at louwlb@unisa.ac.za.

Address: Room 4-57 AJH van der Walt Building

Muckleneuk campus

Pretoria

3.2 Department

The contact information for the Department of Operations Management is:

Tsholofelo Raseroka

Departmental Secretary

012 429 3176

rasert@unisa.ac.za

3.3 University

To contact the university, you should follow the instructions in the **Study@ Unisa** brochure. Tutorial Letter 301 (MNALLEQ/301) also contains relevant contact information for the university. Remember to always have your student number available when contacting the university.

When you contact the lecturer, please do not forget to provide your student number. This will help the lecturers to assist you.

4 RESOURCES

4.1 Joining myUnisa

If you have access to a computer that is linked to the internet, you can quickly access resources and information at the university. The myUnisa learning management system is Unisa's online campus that will help you communicate with your lecturers; other students and the administrative departments at Unisa – all through the computer and the internet.

You can start at the main Unisa website, <http://www.unisa.ac.za>, and then click on the myUnisa orange block. This will take you to the myUnisa website. To go to the myUnisa website directly, go to <https://my.unisa.ac.za>. When you are on the myUnisa website, click on the “Claim UNISA Login” at the right-hand side of the screen. You will then be prompted to give your student number to claim your initial myUnisa as well as myLife login details.

Please consult the publication **Study @ Unisa** which you received with your study material for more information on myUnisa.

4.2 Other resources: printed support materials

Because we want you to be successful in this online module, we also provide you with some study material in printed format. This will allow you to read the study material, even if you are not online.

- The printed study material will be sent to you at the beginning of the semester, but you do not have to wait to receive it to start studying – you can go online as soon as you have registered and all your study material will be there.
- Therefore, the printed material is not something you need to wait for before you start with the module. It is only an **offline** copy of the formal content for the online module.
- This will give you the chance to do a lot of the studying for this module WITHOUT having to go to the internet or an internet café; and it will save you money. You will be able to take as much time as you need to read, and to re-read, the materials and do the activities.

It is therefore very important that you log into myUnisa regularly. We recommend that you check for the following at least every week or every ten days

- **Check for new announcements.** You can also set up your myLife email so that you receive the announcement emails on your cell phone.
- **Do the discussion forum activities.** For every unit in this module, we want you to discuss the activities with the other people in your group.
- **Do other online activities.** For some unit activities, you may need to take a quiz or complete a survey under **Self-assessment**. Do not skip these activities because they will help you complete the assignments and the other activities for the module.

We hope that this system will help you succeed in this online module by giving you extra ways to study the materials and practise, by applying theory. At the same time, you **MUST** go online to complete the activities and assignments on time and to get the most from the online course.

Remember, the printed support material is a back-up to everything that is found online on myUnisa. It does not contain anything extra. **In other words, you should NOT wait for the printed support material to arrive before you start studying.**

5 HOW TO STUDY THIS MODULE ONLINE

5.1 What it means to study fully online

These modules are taught fully online – this means that it is totally different from some of your other modules at Unisa and has of the following implications:

- ***All your study material and learning activities have been designed for online delivery on myUnisa.*** Despite the fact that we give you a printed copy to support your studies, the module is designed for online delivery.
- ***All your assignments must be submitted online.*** This means that you must do all the activities and submit all the assignments on myUnisa.
- ***All the communication between you and the university also happens online*** – by email, in discussions and through questions and answers. You can use all these ways to ask questions and contact your lecturers and they will be able to communicate with you in the same way – through emails and using the **Announcements, Discussions** and **Questions and Answers** tools.

5.2 The myUnisa tools you will use

All the information about myUnisa tools is located on the myUnisa website for this module, in unit 0.

In this module, there are three different types of assessments, using different myUnisa tools:

- **Discussions.** This tool is the place for online discussion forums, where you share your ideas and insights with the other students in your small groups. Under the **Discussions** tool, there may be several other discussion forums where you can share ideas and post

your discussions online. We also give you a place just to chat socially with the other students who are also doing the course – we call this the "Student Lounge".

- **Assignments.** The assignments for this module consist of two compulsory multiple-choice assignments. These assignments must be submitted, using the online **Assignments** tool on myUnisa.
- **Self-assessment.** You can use the **Self-assessment** tool to test your knowledge. It will give you access to a selection of questions to help you prepare for the examination.

5.3 Suggested study programme

A proposed study programme is provided in the box below to help you plan your academic year. Complete the column with due dates according to your own planning.

WEEK	DUE DATE	ACTIVITY	✓
1		Read through tutorial letters Register on myUnisa Introduce yourself on the discussion forum on myUnisa	
2		Study unit 1 and complete the self-assessment questions	
		Study unit 2 and complete the self-assessment questions	
3		Study unit 3 and complete the self-assessment questions	
		Study unit 4 and complete the self-assessment questions	
4		Study unit 5 and complete the self-assessment questions	
5		Study unit 6 and complete the self-assessment questions	
6		Study unit 7 and complete the self-assessment questions	
7	SEMESTER 1 DUE DATE: 06 March 2017 Try to submit by 27 February 2017 _____ SEMESTER 2 DUE DATE: 25 August 2017 Try to submit by 18 August 2017	COMPLETE COMPULSORY ASSIGNMENT 01 AND SUBMIT	
8		Study unit 8 and complete the self-assessment questions	
		Study unit 9 and complete the self-assessment questions	
9		Study unit 10 and complete the self-assessment questions	
		Study unit 11 and complete the self-assessment questions	
10		Study unit 12 and complete the self-assessment questions	
11		Study unit 13 and complete the self-assessment questions	
		Study unit 14 and complete the self-assessment questions	
12	SEMESTER 1 DUE DATE:	COMPLETE COMPULSORY ASSIGNMENT 02	

	03 April 2017 Try to submit by 27 March 2017 <hr/> SEMESTER 2 DUE DATE: 22 September 2017 Try to submit by 15 September 2017	AND SUBMIT	
13		Revise study units 1–4 Complete the self-assessment questions at the end of each study unit	
14		Revise study units 5–8 Complete the self-assessment questions at the end of each study unit	
15		Revise study units 9–11 Complete the self-assessment questions at the end of each study unit	
16		Revise study units 12-14 Complete the self-assessment questions at the end of each study unit	

Note: The golden rule is to set regular study sessions and keep to them. Remember to include all your subjects in the programme!

With regular study you will be able to identify your problems in good time for discussion with the lecturer. You should spend no less than six hours per week on Safety Management.

6 ASSESSMENT

6.1 Assessment plan

We will make use of two types of assessments in this module. The first is a formative assessment. The formative assessment consists of two compulsory assignments. You need to complete both assignments in order to get admission to the examination. The

second type of assessment is a summative assessment. The summative assessment is the examination paper you will write at the end of the semester.

The two **compulsory assignments** must be submitted for assessment. The mark you obtain for these assignments will make up your year mark for Safety Management. Therefore, it is of utmost importance that you submit the assignments.

The due dates for the compulsory assignments are as follows:

Semester 1 Compulsory Assignment 01 Unique number: 776067	Semester 1 Compulsory Assignment 02 Unique number: 747955
06 MARCH 2017	03 APRIL 2017

Semester 2 Compulsory Assignment 01 Unique number: 678745	Semester 2 Compulsory Assignment 02 Unique number: 781849
25 AUGUST 2017	22 SEPTEMBER 2017

There are thousands of assignments that need to be processed by Unisa on the due dates. In order to avoid system problems that might occur, try to submit your assignments a week or two in advance.

YOU MUST SUBMIT YOUR ASSIGNMENTS ON TIME.

NO EXTENTION WILL BE GRANTED TO THE ASSIGNMENT DUE DATES.

6.2 Year mark and final examination

You will be allocated a mark for both Assignments 01 and 02. This mark will be combined with your examination mark to determine your final mark.

Your final assessment mark for this module will be a combination of the assignment marks and the examination mark. Your assignments count 20% towards your final mark and your examination 80%.

Students who do not submit assignments for assessment purposes or do not obtain a pass mark in the compulsory assignments but write the examination must still obtain a minimum of 50% for the assignment marks and the examination mark combined (for the final assessment mark). Please note that irrespective of the year mark obtained, you must obtain a subminimum of 40% in the examination. You will therefore not pass the module if your examination mark is less than 40%.

How will this work in practice?

Please study the following example of how the assignment mark will contribute to the final assessment mark:

- Compulsory Assignment 01 contributes 50% to the year mark.
 - Compulsory Assignment 02 contributes 50% to the year mark.
- (Both assignments contribute 20% to the final mark.)
- The examination contributes 80% to the final mark.

Example:

You submit Assignments 01 and 02 and write the examination:

Say you obtain the following marks:

Assignment 01	=	80%
Assignment 02	=	70%
Examination	=	60%

Therefore:

Assignment 01:	80×0.50	=	40
Assignment 02:	70×0.50	=	35
Total:	$24 + 49$	=	75

Since the assignments account for 20% of the final mark, the marks obtained for your assignments will be:

Assignments: $75 \times 0.20 = 15\%$

Since the examination counts 80% towards your final mark, your examination mark will be calculated as follows:

Examination: $60 \times 0.80 = 48\%$

The results of these two calculations will be added to each other in order to calculate the final mark for the module.

$$15\% + 48\% = 63\%$$

The higher your year mark, the more it will contribute to your final marks.

6.3 Feedback on assignments

You will automatically receive the correct answers to Assignments 01 and 02. Feedback on the self-assessment questions will be available on myUnisa for all students registered for this module. As soon as you receive the feedback, please check your answers. The assignments and feedback constitute an important part of your learning and should help you to be better prepared for the examination.

Please note that **feedback will only be sent after the due date of the assignment** and the lecturer will not provide any answers on the assignment question before that date.

6.4 Examination period

The examination for this module will be written in **May/June 2017** for first semester students and **October/November 2017** for second semester students. You will receive adequate guidelines during the course of the year as to what you should study and how you should prepare.

6.5 Examination paper

The paper will count 70 marks and the **duration of the examination will be two hours**. The exact time and date of the examination will be forwarded to you by the Examination Department later during the year.

- If your final mark (as calculated according to the method shown above) is 50% or more, you will have passed Safety Management II.
- If your final mark is below 50%, and your examination mark is between 40% and 49%, you fail, but will be registered for the supplementary examination.
- If your examination mark is below 40%, you will not be allowed to write the supplementary examination and you must re-register in the next registration period.

7 COMPULSORY ASSIGNMENTS – SEMESTER 1

SEMESTER 1 – ASSIGNMENT 1

DUE DATE: 06 MARCH 2017

UNIQUE NUMBER: 776067

INSTRUCTIONS:

Indicate which of the following statements are correct by entering the correct answer on myUnisa.

This assignment covers study units 1 to 7.

TRY TO SUBMIT THIS AT LEAST ONE WEEK BEFORE THE DUE DATE.

1. The Industrial Revolution led to changes in production which includes ...
 - (1) the introduction of inanimate power.
 - (2) the substitution of people for machines.
 - (3) the use of old methods for converting raw materials.
 - (4) no division of labour.

2. The fellow servant rule held that ...
 - (1) people who accept a job assume the risks that go with it.
 - (2) the employer was absolved of any injury if the actions of employees contributed to their own injuries
 - (3) employers were not liable for workplace injuries resulting from the negligence of other employees.
 - (4) employees should accept the consequences of their actions.

3. _____ introduced an industrial medical service for workers.
 - (1) The Code of Hammurabi
 - (2) Rameses II
 - (3) The Romans
 - (4) The Industrial Revolution

4. In terms of Section 8(1) of the Occupational Health and Safety Act 85 of 1993 (OHS Act) _____ is/are responsible for establishing and maintaining a workplace that guarantees the safety of employees.
 - (1) the employer
 - (2) employees
 - (3) safety officers
 - (4) health and safety representatives

5. Safety management has _____ responsibility with regard to the nature and quality of the safety programme in business operations.
- (1) a line
 - (2) an overall
 - (3) no
 - (4) an advisory staff
6. Companies that are committed to providing a safe and healthy workplace employ a safety and health manager at _____ in the corporate hierarchy.
- (1) the highest level
 - (2) the lowest level
 - (3) an appropriate level
 - (4) any level
7. The _____ is primarily concerned with radiation in the workplace.
- (1) occupational physician
 - (2) health physicist
 - (3) industrial hygienist
 - (4) occupational health nurse
8. Continuous improvement represents ...
- (1) organisational efforts of project management, process management and total quality management.
 - (2) once-off efforts.
 - (3) efforts not flowing from the organisational policy.
 - (4) efforts focusing on the quality of safety in certain operational activities.
9. Using materials that are less dangerous to control inherent risk associated with the operations process is referred to as ...
- (1) intensification.
 - (2) attenuation.
 - (3) simplification.
 - (4) substitution.
10. To which part of the organisation does workers belong that perform the work that directly relates to the primary objectives of the organisation?
- (1) strategic apex
 - (2) operative core
 - (3) middle line
 - (4) support staff
11. The safety practitioner is responsible for ...
- (1) assisting line staff with risk assessment.
 - (2) performing risk assessment.
 - (3) enforcing procedures with regard to risk assessment.

- (4) the identification of hazards.
12. The International Organisation for Standardisation (ISO) ...
- (1) is a governmental organisation.
 - (2) can enforce the application of its standards.
 - (3) promotes standards in international trade, communications and manufacturing.
 - (4) focuses on health and safety only.
13. The scope of ISO 9000 consists of ...
- (1) clarifying principle production-related concepts and distinctions and interrelationships among them.
 - (2) providing guidance for the selection and use of ISO 9000 standards on production management and production assurance.
 - (3) clarifying principle operations-related concepts and distinctions and interrelationships among them.
 - (4) providing guidance for the selection and use of ISO 9000 standards of quality management and quality assurance.
14. The implementation of the policy plan must be monitored consistently. Specific issues to consider with regard to monitoring include ...
- (1) measurement must focus on quantitative data only.
 - (2) measurement must focus on qualitative data only.
 - (3) measurement must focus on quantitative and qualitative data.
 - (4) measurement must focus on specific accidents.
15. A _____ is an operational principle, criterion, or requirement.
- (1) law
 - (2) code
 - (3) standard
 - (4) term
16. Which of the following types of notice, served by inspectors, indicate that the employer is compliant, but there is room for improvement?
- (1) improvement notice
 - (2) contravention notice
 - (3) prohibition notice
 - (4) warning notice
17. Which section of the OHS Act indicates that every employee must be made aware of the hazards that are present and with precautionary measures?
- (1) Section 8
 - (2) Section 9
 - (3) Section 13
 - (4) Section 14

18. The formal recognition or confirmation of professional people who possess certain qualifications and qualities that meet certain standards of professional service delivery is referred to as ...
- (1) qualification.
 - (2) accreditation.
 - (3) benchmarking.
 - (4) competence.
19. One of the benefits that are associated with the certification of safety practitioners that go with the accreditation of safety management comprise ...
- (1) structure and responsibility.
 - (2) less satisfied customers.
 - (3) professional networking.
 - (4) less productive employees.
20. When remaining risk is given to insurance companies, it is referred to as risk ...
- (1) reduction.
 - (2) transference.
 - (3) minimising.
 - (4) substitution.

[TOTAL: 20]

SEMESTER 1 – ASSIGNMENT 2**DUE DATE: 03 APRIL 2017****UNIQUE NUMBER: 747955****INSTRUCTIONS:**

Indicate which of the following statements are correct by entering the correct answer on myUnisa.

This assignment covers study units 8–14.

TRY TO SUBMIT THIS AT LEAST ONE WEEK BEFORE THE DUE DATE.

1. A _____ comprises a group of components that are interrelated and that regularly interrelates with one another within the context of a unified and integrated whole.
 - (1) department
 - (2) team
 - (3) system
 - (4) working environment

2. Safety is a _____ responsibility.
 - (1) line
 - (2) staff
 - (3) organisational

 - (4) strategic

3. The first control to consider during the system safety precedence sequence comprises ...
 - (1) accepting residual safety risk.
 - (2) providing warning devices.
 - (3) providing safety devices.
 - (4) designing for minimum safety risk.

4. _____ depicts the safety risk level associated with specific safety hazards in a given system.
 - (1) Safety systems
 - (2) Risk assessment
 - (3) Safety risk assessment codes
 - (4) Risk analysis

5. “Human factors” are important in system safety analysis and safety risk assessment because ...
 - (1) humans are less engaged in failure modes.
 - (2) humans are less predictable than machines.
 - (3) human reliability is easy to judge.
 - (4) humans are consistent.

6. The “safety charter” ...
- (1) differentiates between line and staff responsibilities.
 - (2) indicates that the safety function be implemented as a staff responsibility
 - (3) indicates that the safety organisational element within a company is a line function.
 - (4) indicates that safety is a function of the staff.
7. Training forms part of the _____ tasks during the life cycle of a project.
- (1) planning
 - (2) primary system
 - (3) support
 - (4) operational
8. The _____ must be developed in full during the development phase.
- (1) FTA
 - (2) SSPP
 - (3) HAZOP
 - (4) CAT
9. The purpose of _____ is to list and analyse all the changes in a system systematically to determine the effects of the changes and their impacts on the system and to make recommendations for preventing or correcting any adverse effects.
- (1) ECFCT
 - (2) FTA
 - (3) FEMA
 - (4) CAT
10. Sequentially listing the events as well as the conditions that led to the accident is depicted by ...
- (1) ECFCT.
 - (2) FEMA.
 - (3) MORT.
 - (4) ETBA.
11. Once all the causal factors have been listed and placed in the storyline of the ECFCT, the identification of root causes commences. The test of _____ is/are applied in this regard.
- (1) root cause and change
 - (2) original condition
 - (3) sufficiency and necessity
 - (4) necessity and root cause
12. The design process is a plan of action for reaching a goal. This design process proceeds in five sequential steps. The first step in this process comprises ...
- (1) analysis and evaluation
 - (2) synthesis
 - (3) problem identification

- (4) documentation and communication
13. The hierarchy of controls for dealing with safety in the workplace indicate that safety control measures must be executed according to hierarchical steps. Personal protective equipment (PPE) should be the _____ resort for protecting people.
- (1) first
 - (2) second
 - (3) third
 - (4) last
14. The specific study field of making human behaviour safe in the workplace is referred to as
- (1) CEA
 - (2) BBS
 - (3) FTA
 - (4) PHA
15. A potentially life-threatening situation, usually occurring suddenly and unexpectedly is referred to as ...
- (1) an emergency.
 - (2) an accident.
 - (3) an incident.
 - (4) a safety concern.
16. A company's emergency action plan (EAP) should be ...
- (1) applicable to specific emergencies only.
 - (2) not include assignments and responsibilities.
 - (3) not include accident prevention strategies.
 - (4) a collection of small plans for each anticipated emergency.
17. Emergency plans should be customised plans to meet local needs. Keeping this in mind, emergency plans ...
- (1) should be location-specific.
 - (2) should not include a chain of command.
 - (3) should not include coordination information.
 - (4) should include off-site training and practice drills.
18. The _____ has ultimate responsibility and authority for disaster recovery.
- (1) employer
 - (2) safety manager
 - (3) recovery coordinator
 - (4) police department
19. Lifesaving measures taken to assist an injured person until medical help arrives is referred to as ...
- (1) risk assessment.
 - (2) first aid.

- (3) CPR.
- (4) risk management.

20. After a disaster in the workplace, a comprehensive _____ should be completed before business is resumed.

- (1) hazard analysis
- (2) hazard assessment
- (3) risk analysis
- (4) risk assessment

[TOTAL: 20]

8 COMPULSORY ASSIGNMENTS – SEMESTER 2

SEMESTER 2 – ASSIGNMENT 1

DUE DATE: 25 AUGUST 2017

UNIQUE NUMBER: 678745

INSTRUCTIONS:

Indicate which of the following statements are correct by entering the correct answer on myUnisa.

This assignment covers study units 1 to 7.

TRY TO SUBMIT THIS AT LEAST ONE WEEK BEFORE THE DUE DATE.

1. The practice of taking notice of and dealing with injuries in the workplace was introduced by ...
 - (1) the Industrial Revolution.
 - (2) the Code of Hammurabi.
 - (3) Rameses II.
 - (4) the Romans.

2. _____ held that employers were not liable for workplace injuries that resulted from the actions of employees that led to their own injuries.
 - (1) The fellow servant rule
 - (2) Contributory negligence
 - (3) Assumption of risk
 - (4) Organised labour

3. A broad focus basis for modern safety management, including the encouragement of accident prevention and making employee health and safety a priority in organisations was proposed by ...
 - (1) the Bhopal tragedy
 - (2) the Hawk's Nest tragedy
 - (3) the asbestos menace
 - (4) Dyktor

4. _____ is responsible for performing regular overviews of the effectiveness of operational activities and procedures that relate to statements concerning standards in the organisational policy.
 - (1) Operations management
 - (2) Safety management
 - (3) General management
 - (4) Strategic management

5. _____ plays an important role in the development and execution of a contingency programme and a disaster management plan, based on the operational activities that the organisation runs in a given community and natural environment.
- (1) Operations management
 - (2) Safety management
 - (3) General management
 - (4) Human resources management
6. _____ represents organisational efforts of project management, process management and total quality management that are on-going with a view to innovate processes, services and products.
- (1) Organisational policy
 - (2) Emergency preparedness
 - (3) Continuous improvement
 - (4) Safety management
7. Productivity, cost, response time, service, image and quality are essential ingredients of ...
- (1) competitiveness.
 - (2) engineering.
 - (3) multidisciplinary teams.
 - (4) safety management.
8. _____ are concerned with the recognition of environmental factors and to understand their effect on humans and their well-being.
- (1) Occupational physicians
 - (2) Industrial engineers
 - (3) Health physicists
 - (4) Industrial hygienists
9. Middle-level and lower-level management forms part of the _____ of an organisation.
- (1) strategic apex
 - (2) operating core
 - (3) middle line
 - (4) support staff
10. Using smaller quantities of dangerous materials to control inherent risk associated with the operations process is called ...
- (1) intensification.
 - (2) substitution.
 - (3) attenuation.
 - (4) limiting effects.
11. It is the responsibility of _____ to innovate and to manage change on a consistent basis.

- (1) advisory staff
 - (2) safety management
 - (3) operations management
 - (4) line management
12. _____ is of particular significance for business operations in terms of environmental management systems.
- (1) ISO 9000
 - (2) ISO 14000
 - (3) ISO 18000
 - (4) OHSAS 18001
13. Facets related to the enhancement of _____ are need for the product, design of the product, meeting product design standards and product support.
- (1) production
 - (2) product safety
 - (3) product quality
 - (4) operations
14. A company's health and safety policy must be developed under the direction of senior management. The policy must be characterised by:
- (1) compliance with legal requirements.
 - (2) focus on once-off improvement.
 - (3) continuous policy review.
 - (4) employer awareness and competency.
15. A _____ is a set of standards, rules or regulations relating to a specific area.
- (1) law
 - (2) code
 - (3) term
 - (4) legal principle
16. A _____ is an action involving a failure to exercise reasonable care that as a result may lead to civil litigation.
- (1) liability
 - (2) proximate cause
 - (3) foreseeability
 - (4) tort
17. The Occupational Health and Safety Act 85 of 1993 made safety the responsibility of ...
- (1) the factory engineer.
 - (2) the Chief Executive Officer (CEO).
 - (3) everyone.
 - (4) the safety manager.

18. Safety practitioners in South Africa can be certified for accreditation on three different levels based on ...
- (1) education and experience.
 - (2) education and personal characteristics.
 - (3) experience and willingness.
 - (4) experience and management criteria.
19. Grade 12 and relevant NQF level 8 qualification or equivalent SAQA-recognised international qualification and a panel interview based on a case study form part of the criteria for the accreditation of the ...
- (1) ROSCord.
 - (2) ROSPrac.
 - (3) ROSProf.
 - (4) All the above.
20. Establishing professional credentials for safety practitioners in the safety profession by means of professional certification is ...
- (1) required by law.
 - (2) an important way to ensure qualitative safety practice.
 - (3) an important way to prevent incidents and accidents in the workplace.
 - (4) not a worldwide phenomenon.

[TOTAL: 20]

SEMESTER 2 – ASSIGNMENT 2**DUE DATE: 22 SEPTEMBER 2017****UNIQUE NUMBER: 781849****INSTRUCTIONS:**

Indicate which of the following statements are correct by entering the correct answer on myUnisa.

This assignment covers study units 8–14.

TRY TO SUBMIT THIS AT LEAST ONE WEEK BEFORE THE DUE DATE.

1. The basic system safety concepts or principles include that ...
 - (1) safety is a staff responsibility.
 - (2) safety is productive.
 - (3) safety requires no effort.
 - (4) safety is a management tool.

2. Safety risk severity, safety risk likelihood and safety risk assessment matrix comprise the three _____ criteria
 - (1) system safety
 - (2) system risk
 - (4) safety
 - (5) production

3. A Level B likelihood of a mishap occurring can be described as ...
 - (1) likely to occur frequently.
 - (2) remote, but may occur during the life of an item
 - (3) will occur several times during the life of an item
 - (4) will occur sometime during the life of an item.

4. _____ implies that every system has a beginning and an end.
 - (1) Life cycle
 - (2) Standardisation
 - (3) Benchmarking
 - (4) Human factors

5. The purpose of _____ is to equip people with the necessary knowledge, attitudes and skills to perform specific tasks.
 - (1) management
 - (2) education and training
 - (3) development
 - (4) human factors

6. It is important that _____ make an explicit decision about implementing a system safety programme.
- (1) employers and employees
 - (2) the safety manager
 - (3) the safety committee
 - (4) top management
7. Training starts during the _____ phase of the safety programme.
- (1) concept
 - (2) design, definition or development
 - (3) production
 - (4) operation and deployment
8. It is important that the _____ must monitor the implementation of termination procedures that were developed during the preceding design and development phases.
- (1) safety manager
 - (2) workers
 - (3) person who is responsible for the system safety elements
 - (4) person who is responsible for quality
9. The significant change analysis of any system requires that the system must be effectively understood _____ changes in the system have occurred.
- (1) before
 - (2) after
 - (3) before and after
 - (4) before significant
10. _____ indicate the actions or activities that occurred during the accident.
- (1) Events
 - (2) Impacts
 - (3) Sequences
 - (4) Inputs
11. _____ implies that if any of the listed conditions were not present, the event(s) that it/they relate to would not occur.
- (1) Sufficiency
 - (2) Necessity
 - (3) Synthesis
 - (4) Root cause

12. Documentation and communication is the _____ step in the design process.
- (1) first
 - (2) second
 - (3) third
 - (4) fourth
13. Designing for safety as part of the hierarchy of controls for dealing with safety in the workplace is associated with ...
- (1) designing software.
 - (2) designing workstations.
 - (3) designing hardware and work processes.
 - (4) designing control measures.
14. The only and best way to ensure that appropriate and effective safety control measures are developed and implemented in the workplace is to follow ...
- (1) an integrated holistic approach
 - (2) a safety management approach
 - (3) a benchmarking approach
 - (4) a competitive approach
15. The elements of emergency preparation comprise ...
- (1) planning, practicing, evacuation and adjusting.
 - (2) planning, practicing, implementation and evaluation
 - (3) planning, performing, evaluating and adjusting
 - (4) planning, practicing, evaluating and adjusting.
16. Training employees in first-aid techniques is _____ of preparing for emergencies.
- (1) the biggest part
 - (2) the only necessary part
 - (3) an important part
 - (4) not an important part
17. A company's _____ should clearly identify the different personnel and groups that respond to various types of emergencies and who is in charge.
- (1) emergency recovery plan
 - (2) emergency response plan
 - (3) safety plan
 - (4) operational plan
18. The _____ consists of key personnel to whom the disaster coordinator can delegate specific responsibilities.
- (1) recovery team
 - (2) safety committee
 - (3) health team

- (4) first aid team
19. Planning to give employees opportunities to participate in personal actions taken on behalf of fatally injured employees and their families, forms part of ...
- (1) recovery communications.
 - (2) damage assessment and salvage.
 - (3) recovery analysis and planning.
 - (4) employee assistance.
20. _____ is the process of quantifying the level of risk associated with a particular hazard; and should be a structured and systematic process.
- (1) Risk assessment
 - (2) Risk reduction
 - (3) Risk transference
 - (4) Risk management

[TOTAL: 20]

9 SELF-ASSESSMENT QUESTIONS

DO NOT SUBMIT THESE QUESTIONS FOR MARKING.

THE ANSWERS TO THE SELF-ASSESSMENT ASSIGNMENT ARE INCLUDED AT THE END OF THIS TUTORIAL LETTER

INSTRUCTIONS:

Answer the following questions. When you have completed this assignment, compare your answers to the model answers provided.

QUESTION 1

- 1.1 To design implies implementing action within a problem-solving strategy in order to affect specific goals. With this statement in mind, write down the steps in the design process, in sequential order. (5)
 - 1.2 Historically, there were three (3) laws that employers relied upon to defend themselves in the case of employees sustaining occupational injuries. **Explain** what each of these common law defences entailed. (6)
 - 1.3 **Identify** the advisory responsibilities of safety management and provide a brief explanation of each of these responsibilities. (12)
 - 1.4 Safety management and operations management go hand in hand and are integrated parts of an organisation. To which part of an organisation does safety management belong? Why does it belong to that part of the organisation? (2)
- [25]**

QUESTION 2

- 2.1 The scope of the International Organisation for Standardisation (ISO) comprises two (2) elements. **Describe** the two (2) elements. (4)
 - 2.2 The Occupational Health and Safety Act is one of the vital pieces of information any safety manager needs to be aware of. **Explain** section 13 of the Occupational Health and Safety Act (OHS Act). (6)
 - 2.3 **List** any five (5) common benefits of the certification of safety practitioners that go with the accreditation of safety management. (5)
- [15]**

QUESTION 3

- 3.1 System safety comprises five (5) basic points of departure. What are these points? (5)
- 3.2 **Explain** the functions of safety risk assessment codes. (6)
- 3.3 The term “life cycle” implies that every system has a beginning (cradle) and an end (grave). How would you summarise the phases in the life cycle of a safety programme. (5)
- 3.4 **Illustrate** the process of listing and analysing change on a comparable basis by making use of a diagram. (6)
- [22]**

QUESTION 4

- 4.1 **Identify** the elements of emergency preparation. (4)
- 4.2 Risk assessment is the process of quantifying the level of risk associated with a particular hazard. It should be a structured and systematic process. What four (4) questions should be answered during the risk assessment process? (4)
- [8]**

TOTAL: [70]

10 ANSWERS TO SELF-ASSESSMENT

QUESTION 1

1.1 To design implies implementing action within a problem-solving strategy in order to affect specific goals. With this statement in mind, write down the steps in the design process, in sequential order. (5)

(See page 64 in the prescribed book.)

- 1) problem identification
- 2) synthesis
- 3) analysis and evaluation
- 4) document and communicate
- 5) produce and deliver

1.2 Historically, there were three (3) laws that employers relied upon to defend themselves in the case of employees sustaining occupational injuries. Explain what each of these common law defences entailed. (6)

(See page 131 in the prescribed book.)

- 1) **Contributory negligence was a factor** – the injured worker’s own negligence contributed to the accident. This was usually enough to deny compensation even if the employee’s negligence was a minor factor.
- 2) **Negligence on the part of a fellow worker** – negligence by a fellow employee, even if only a minor contributing factor, could be enough to deny compensation. This defence was also known as “the fellow servant rule”.
- 3) **Assumption of risk on the part of the injured employee** – the employee knew the risk involved in the job and could therefore not receive compensation when such risk led to accidents and injuries. Also known as “assumption of risk”.

1.3 Identify the advisory responsibilities of safety management and provide a brief explanation of each of these responsibilities. (12)

(See sections 4.5.1 to 4.5.6 in the study guide.)

- 1) **Anticipate hazardous conditions and assist with risk assessment** – safety practitioners must be alert to the possibility of unplanned interaction of hazards and energy exchange that could result in harm or damage.
- 2) **Assist in the development of safety control measures** – advise line staff on the development of risk mitigating practices and safety control measures. Consider the best internationally accepted practices.
- 3) **Assist in the implementation of safety control measures** – the safety practitioner has to guide and monitor during the implementation of controls. They also have to assist in planning the implementation process, and determine the feasibility and success of such process.

- 4) **Assist in evaluating the success of control measures** – safety practitioners must play an active role in determining the efficacy of existing and new safety processes for work. They should advise line managers and consider audit objectives, audit procedures, the audit team, the audit report and the implementation of audit report recommendations.
- 5) **Assist in the analysis of safety incidents and implementation of recommendations** – analysis should be done to reveal and understand flaws or deficiencies in safety management control measures and programmes (root causes should be determined). Safety practitioners are responsible for assisting (advising and facilitating) the process of analysis and the implementation of recommendations resulting from incident analysis.
- 6) **Research on and advice in maintaining the process of continual improvement** – the safety practitioner should provide line management with advice on the newest theory, practices and technology as it applies to the organisation.

1.4 Safety management and operations management go hand in hand and are integrated parts of an organisation. To which part of an organisation does safety management belong? Why does it belong to that part of the organisation? (2)

(See section 4.2 in the study guide.)

The techno structure – safety practitioners are specialists who influence and affect the work of all the other parts of the organisation.

[25]

QUESTION 2

2.1 The scope of the International Organisation for Standardisation (ISO) comprises two (2) elements. Describe the two (2) elements. (4)

(See section 5.3 in the study guide.)

- 1) It clarifies principle quality-related concepts and distinctions and interrelationships among them and,
- 2) Provides guidance for the selection and use of ISO 9000 family of International Standards on quality management and quality assurance.

2.2 The Occupational Health and Safety Act is one of the vital pieces of information any safety manager needs to be aware of. Explain section 13 of the Occupational Health and Safety Act (OHS Act). (6)

(See section 6.7.3 in the study guide.)

Section 13 comprises the **duty to inform**. Employers must make sure that:

- 1) Employees should be aware of the hazards that are present, as well as with the necessary precautionary measures.
- 2) Health and safety representatives should be informed of inspections, investigations and formal inquiries by inspectors.
- 3) Safety representatives should be informed of incidents in the workplace or their area of work.

2.3 List any five (5) common benefits of the certification of safety practitioners that go with the accreditation of safety management. (5)

(See section 7.3 in the study guide.)

Any five of the following:

- 1) People who are accredited are more productive.
- 2) They consistently maintain acceptable service standards.
- 3) The quality of service can be benchmarked against the service of other similar practitioners.
- 4) Accredited people are more reliable in their service delivery.
- 5) They have to keep up with new developments in knowledge and trends in practice.
- 6) Customers are more satisfied with the quality of service delivery.
- 7) Professional networking by attending continuous learning opportunities enhances professional expertise.

[15]

QUESTION 3

3.1 System safety comprises five (5) basic points of departure. What are these points? (5)

(See section 8.3.1 in the study guide.)

- 1) Safety is a line responsibility.
- 2) Safety is productive.
- 3) Safety requires upstream effort.
- 4) The system safety precedence sequence.
- 5) Systematic tools and techniques help.

3.2 Explain the functions of safety risk assessment codes. (6)

(See section 9.2.2 in the study guide.)

- 1) It depicts the safety risk level associated with specific safety hazards in a given system.
- 2) It serves as the basis for determining the system safety effort.
- 3) It is the basis for determining alternative design approaches as early as in the design phase.

3.3 The term “life cycle” implies that every system has a beginning (cradle) and an end (grave). How would you summarise the phases in the life cycle of a safety programme. (5)

(See section 10.5.2 in the study guide.)

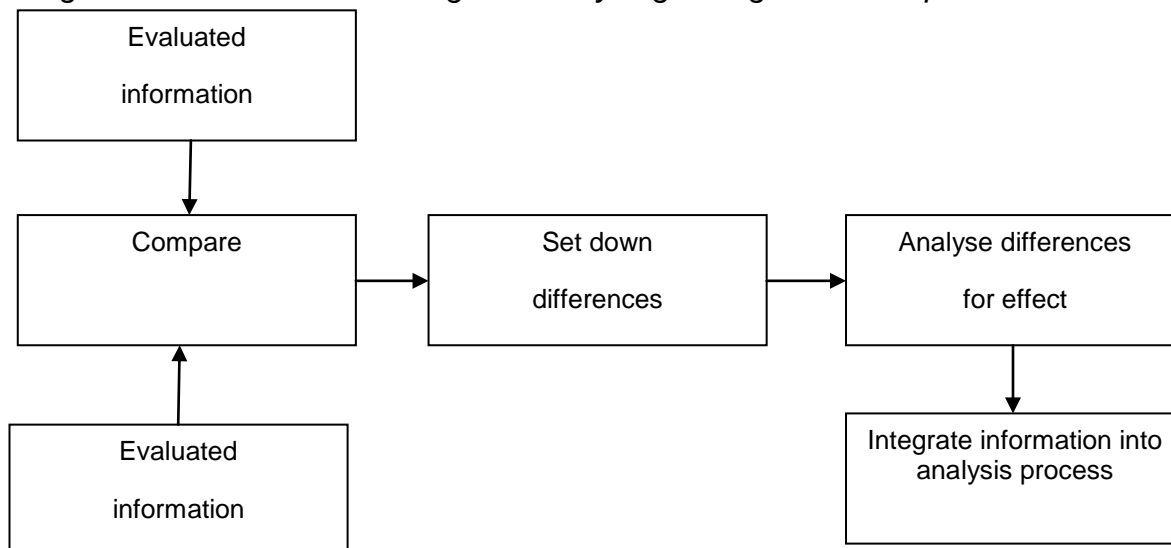
- 1) the concept phase
- 2) the design, definition or development phase
- 3) the production phase

- 4) the operation and deployment phase
- 5) The disposal or termination phase

3.4 Illustrate the process of listing and analysing change on a comparable basis by making use of a diagram. (6)

(See section 11.4.3 in the study guide)

Diagram 11.1: Process of listing and analysing change on a comparable basis



(Stephan 2004:212)

[22]

QUESTION 4

4.1 Identify the elements of emergency preparation. (4)

(See page 442 in the prescribed book.)

- 1) planning
- 2) practising
- 3) evaluating
- 4) adjusting

4.2 Risk assessment is the process of quantifying the level of risk associated with a particular hazard. It should be a structured and systematic process. What four (4) questions should be answered during the risk assessment process. (4)

(See page 222 in the prescribed book.)

- 1) How **severe** are the potential injuries?
- 2) How **frequently** are employees exposed to the potential hazards?
- 3) What is the **possibility** of avoiding the hazard if it does occur?
- 4) What is the **likelihood** of an injury should a safety control system fail?

TOTAL:

[8]
[70]

11 CONCLUSION

Do not hesitate to contact your lecturers by email if you are experiencing problems with the content of this tutorial letter or any other aspect of the module.

We wish you a fascinating and satisfying journey through the learning material and trust that you will complete the module successfully.

Enjoy the journey!

Mrs Elriza Esterhuyzen

Senior Lecturer: Safety Management

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